

Occupational Therapy and Infancy: Supporting Families During the Earliest Occupations

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The National Perinatal Association (NPA) is an interdisciplinary organization that strives to be a leading voice for perinatal care in the United States. Our diverse membership is comprised of healthcare providers, parents & caregivers, educators, and service providers, all driven by their desire to give voice to and support babies and families at risk across the country.

Members of the NPA write a regular peer-reviewed column in Neonatology Today.



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Occupational Therapy and Infancy:

Occupational therapy (OT) is a holistic, client-centered, occupation-based profession focused on assisting individuals to independently participate in daily activities to the best of their ability (1). Occupational therapy practitioners (OTPs) are

board certified, have extensive academic training and clinical experience and treat individuals across the lifespan in various settings (2) while considering the “biological, developmental, and social-emotional aspects of human function in the context of daily occupations” (3). OTPs utilize the power of occupation to support families and infants in achieving positive outcomes (4). The first year of an infant’s life is a rapid period of growth; infants are learning how to actively interact with their environment and family system (5). Occupations of infancy are defined as “any activity or task of value in which the family or setting expects the infant to engage” (4) including activities of daily living (ADL) like feeding and bathing, health management including social and emotional health promotion and maintenance, rest and sleep, play and social participation (1). Infants also participate in co-occupations, meaning infants share an occupation with their caregiver; examples such as play and breastfeeding (1). OTPs also assist families with adapting to new performance patterns including habits, roles, routines, and client factors. OTPs treat infants in settings including hospitals or NICU’s, early intervention (EI), outpatient, and community-based settings. Infants may be referred to OT for concerns with maintaining homeostasis or bonding in the NICU, feeding or sensory concerns, physical development, social-emotional skills, and sleep (1).

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OT in the NICU:

Many infants and families have their first experience with OT in the NICU setting. NICU OTPs have extensive knowledge in neonatal medical conditions, development and understand the complex medical needs of infants in this setting (3). OTPs are members of an interdisciplinary team of professionals including pediatricians, physical therapists (PT), speech-language pathologists (SLP), lactation consultants, respiratory therapists, nurses, midwives, neonatologists, among others. OTPs administer assessments related to sensory processing, motor function, social-emotional development, pain, activities of daily living (ADL), neurobehavioral organization, and environmental screenings (3) to identify and create an appropriate infant and family-centered intervention plan. The primary functions of an OT in the NICU is to focus on developmentally appropriate occupations, maintaining homeostasis (stable vitals, feeding, breathing), self-regulation, sensory development, feeding, motor function, coping and attachment skills, bathing and dressing, and nurturing interactions with caregivers including skin-to-skin contact (3). OTPs utilize various interventions including sensory integration, neurodevelopmental techniques, positioning/handling, infant massage, feed-

ing, bonding, and environmental modifications to minimize stress and overstimulation while in this setting. Therapists must also address the family system by forming a therapeutic relationship with the family. The NICU can cause separation between infant and caregivers especially if there are maternal complications after delivery which can increase stress and instability within the family system (3). Parent-infant attachments and occupations must be prioritized, including bonding such as skin-to-skin contact, or kangaroo care. Kangaroo care is an essential intervention to support infants in the NICU by having the infant lay on the caregiver's bare skin. Benefits to this intervention include more stable heart rate, breathing patterns and temperatures, faster weight gain, more successful feeding, and increased bonding (6). OTPs also consider the Neonatal Integrative Developmental Care Model, meaning therapists are fostering a healing environment in the NICU setting – a setting known to be stressful and overstimulating for infants and their families. Core measures of this model include skin protection, optimizing nutrition, positioning/handling to promote breathing and stability, safeguarding sleep, optimizing nutrition, minimizing stress and pain through environmental and sensory modifications, and partnering with families (7). Research shows that interventionists who follow this model have better growth development outcomes (7).

“As of 2020, over 83% of infants are breastfed at some point in their young life (9). 60% of mothers stop breastfeeding before they intend to stop due to various reasons including latching difficulties, infant weight concerns, lack of work and family support, and concerns with medication while breastfeeding (9).”

Breastfeeding and Feeding:

As of 2020, over 83% of infants are breastfed at some point in their young life (9). 60% of mothers stop breastfeeding before they intend to stop due to various reasons including latching difficulties, infant weight concerns, lack of work and family support, and concerns with medication while breastfeeding (9). OT can assist with facilitating breastfeeding which improves parent-infant attachment and bonding and can also reduce postpartum depression (2). OTPs must consider various aspects of the infant-caregiver dyad during breastfeeding including infant arousal state, respiratory ability, overall stability, oral reflexes, oral strength and endurance and caregiver arousal, attention, posture and upper extremity strength, cognition, and cultural values/beliefs related to feeding (10). It is also important to consider sensory and environmental stimulation, social supports, and bottle/nipple type if the infant is not being breastfed. OTPs can assist breastfeeding caregivers with developing routines and habits to promote breastfeeding and education related to their infant's hunger and stress cues, positioning, ergonomics, self-regulation, and environmental modifications (10). Infant interventions include suck training, positioning, and various sensory strategies to promote arousal levels (10). Environmental and activity modifications include changing the position of feeds, adapting the lighting, touch, sound and using supportive equipment during feeding and adapting the type, thickness or volume of milk and feeding schedule (10). Feeding is a very important occupation for an infant as it takes up much of their

early life and helps facilitate secure attachments to their caregiver as well as promoting self-regulation (11).

OT's Role in Transitioning Home:

OT also plays a role in assisting families with the transition from NICU to home. Transition planning begins at NICU admission with OTPs educating families on various interventions and considerations for the infant's unique medical needs. Upon discharge from the NICU, OTPs may recommend follow-up with EI, outpatient OT or PT, or a feeding clinic to address various concerns including feeding, global developmental delay, ROM or joint limitations, tone management, among others (8). OTPs also educate families on general infant care like signs of stress and how to relax or calm an infant, feeding strategies, home environment set-up and safe sleep strategies. OTPs also work with lactation consultants to address any concerns or strategies related to breastfeeding.

Early Intervention and Infancy:

Infant occupations vary based on family, contextual and cultural factors. OT is a primary service under IDEA Part C and delivers services related to the infant's individualized family service plan (IFSP) outcomes (12). Gorga (1989) identified seven areas of occupational therapy treatment practices for infants in EI including motor control, sensory modulation, adaptive coping, sensorimotor development, social-emotional development, daily living skills and play (11). OT interventions include handling, positioning, adapting the environment, sensory registration, arousal, attention, emotional regulation, cognition, feeding and play activities like reach and grasp (11). The American Occupational Therapy Association (AOTA) elaborated on various interventions in early intervention including promoting healthy bonding and attachment, family education and training, adapting tasks and the environment, participation in ADLs, rest and sleep and play related to the infant's IFSP outcomes (12).

“Occupational therapy practitioners are client-centered, occupation-based and address the infant and their family holistically. Various occupations OTPs can address include feeding, bathing, rest and sleep, health management, play and social participation, among others (1).”

Conclusion:

Occupational therapy practitioners are client-centered, occupation-based and address the infant and their family holistically. Various occupations OTPs can address include feeding, bathing, rest and sleep, health management, play and social participation, among others (1). Breastfeeding is also an important co-occupation OTPs can address in this setting. OT can also work with the family to promote carryover of strategies, encourage developmental care, and optimize infant well-being in the NICU, EI and home setting. Various professions work with occupational therapists on multidisciplinary, transdisciplinary, and interdisciplinary teams including PT, SLP, pediatricians, lactation consultants, nursing, midwives, neonatologists, and other specialists. These

professions would benefit from working with OT to help increase independence, improve overall well-being and participation in infant and family occupations all of which leads to a greater quality of life for both the infant and family. Occupational therapists serve a unique role in the neonatal intensive care setting by identifying, promoting, and advocating for developmental care practices that aim to support families in participating in these early occupations.

References:

1. American Occupational Therapy Association (AOTA). (2020). *Occupational therapy practice framework: Domain and process (4th ed.)*. American Journal of Occupational Therapy, 74(Suppl. 2), 7412410010. doi:10.5014/ajot.2020.74S2001
2. Sponseller, L., Silverman, F., & Roberts, P. (2021). Exploring the role of occupational therapy with mothers who breastfeed. American Journal of Occupational Therapy, 75, 7505205110. doi: 10.5014/ajot/2021.041269
3. Vergara, E., Anzalone, M., Bigsby, R., Gorga, D., Holloway, E., Hunter, J., Laadt, G., & Strzyzewski. (2006). NICU knowledge & skills paper. American Occupational Therapy Association.
4. Cardin, A.D. (2020). Parents' perspectives: An expanded view of occupational and co-occupational performance in the neonatal intensive care unit. American Journal of Occupational Therapy, 74, 7402205030. doi: 10.5014/ajot.2020.034827
5. Centers for Disease Control and Prevention (2022). *Child development: Infants (0-1 year)*. U.S. Department of Health & Human Services.
6. The Children's Hospital of Philadelphia (2012). *Caring for your child: Skin-to-skin care (kangaroo care)*. The Children's Hospital of Philadelphia.
7. Altimier, L. & Phillips, R. (2016). *The neonatal integrative developmental care model: Advanced clinical applications of the seven core measures for neuroprotective family-centered developmental care*. Newborn & Infant Nursing Reviews, 16(4). Doi: 10.1053/j.nainr.2016.09.030
8. Tyska, A. & Marcy, S. (2021). *Neonatal intensive care [PowerPoint slides]*.
9. Centers for Disease Control and Prevention. (2021). *Breast-feeding facts*. U.S. Department of Health & Human Services.
10. Scott, E.F. (2021). *Supporting early feeding skills: Development and intervention [PowerPoint slides]*.
11. Gorga, D. (1989). Occupational therapy treatment practices with infants in early intervention. American Journal of Occupational Therapy, 43(11). doi: 10.5014/ajot.43.11.731
12. Stoffel, A. & Schleis, R. (2014). *FAQ: What is the role of occupational therapy in early intervention?* The American Occupational Therapy Association.

Disclosure: The National Perinatal Association www.nationalperinatal.org is a 501c3 organization that provides education and advocacy around issues affecting the health of mothers, babies, and families.

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